

In the Claims:

Please cancel claims 1-22, 24-30, 35, 41-44, 46, 49-62, 65, and 68-129, without prejudice, and add new claims 130-133, as follows:

1-22. (Canceled)

23. (Currently amended) A chamber, comprising:
a substrate support having a substrate receiving surface;
a chamber lid comprising:
an expanding channel at a central portion of the chamber lid; and
a tapered bottom surface extending from the expanding channel to a peripheral portion of the chamber lid, wherein the tapered bottom surface is shaped and sized to substantially cover the substrate receiving surface, and wherein a plurality of flow sections are defined between the tapered bottom surface of the chamber lid and the substrate receiving surface, wherein a ratio of a maximum area of the flow sections to a minimum area of the flow sections is less than about 2.0;
one or more gas conduits coupled to the expanding channel, wherein the one or more gas conduits are positioned at an angle from a center of the expanding channel and wherein the one or more gas conduits comprise[[s]] one or more valves; and
one or more gas sources coupled to each valve.

24-30. (Canceled)

31. (Currently amended) The chamber of claim ~~30~~ 23, wherein the ratio of the maximum area of the flow sections to the minimum area of the flow sections is less than about 1.5.

32. (Currently amended) The chamber of claim ~~30~~ 23, wherein the ratio of the maximum area of the flow sections to the minimum area of the flow sections is less

than about 1.3.

33. (Currently amended) The chamber of claim ~~30~~ 23, wherein the ratio of the maximum area of the flow sections to the minimum area of the flow sections is about 1.0.

34. (Currently amended) A chamber, comprising:
a substrate support having a substrate receiving surface;
a chamber lid comprising:
[[a]] an expanding channel at a central portion of the chamber lid; and
comprising a tapered bottom surface extending from the expanding channel to a peripheral portion of the chamber lid, wherein the tapered bottom surface is shaped and sized to substantially cover the substrate receiving surface, and wherein a reaction zone defined between the chamber lid and the substrate receiving surface comprises about 1,000 cm³ or less and the substrate receiving surface is adapted to receive a 200 mm diameter substrate;
one or more gas conduits coupled to the expanding channel, wherein the one or more gas conduits are positioned at an angle from a center of the expanding channel and wherein the one or more gas conduits comprise[[s]] one or more valves; and
one or more gas sources coupled to each valve; ~~wherein a reaction zone is defined between the chamber lid and the substrate receiving surface.~~

35. (Canceled)

36. (Currently amended) The chamber of claim 34, wherein the ~~volume of the reaction zone comprises about 500 cm³ or less and wherein the substrate receiving surface is adapted to receive a 200 mm diameter substrate.~~

37. (Currently amended) The chamber of claim 34, wherein the ~~volume of the reaction zone comprises about 200 cm³ or less and wherein the substrate receiving surface is adapted to receive a 200 mm diameter substrate.~~

38. (Currently amended) A chamber, comprising:
a substrate support having a substrate receiving surface;
a chamber lid comprising:
an expanding channel at a central portion of the chamber lid; and
a tapered bottom surface extending from the expanding channel to a peripheral portion
of the chamber lid, wherein the tapered bottom is surface shaped and sized to
substantially cover the substrate receiving surface, and wherein a reaction zone defined
between the chamber lid and the substrate receiving surface ~~The chamber of claim 34,~~
~~wherein the volume of the reaction zone comprises about 3,000 cm³ or less and~~
~~wherein the substrate receiving surface is adapted to receive a 300 mm diameter~~
~~substrate.~~

39. (Currently amended) . The chamber of claim 34 38, ~~wherein the volume of~~
~~the reaction zone comprises about 1,500 cm³ or less and wherein the substrate~~
~~receiving surface is adapted to receive a 300 mm diameter substrate.~~

40. (Currently amended) The chamber of claim 34 38, ~~wherein the volume of~~
~~the reaction zone comprises about 600 cm³ or less and wherein the substrate receiving~~
~~surface is adapted to receive a 300 mm diameter substrate.~~

41-44. (Canceled)

45. (Currently amended) A chamber, comprising:
a substrate support having a substrate receiving surface;
a chamber lid comprising:
~~a tapered~~ an expanding channel ~~extending from~~ at a central portion of the
chamber lid; and
a tapered bottom surface extending from the expanding channel to a
peripheral portion of the chamber lid, wherein the tapered bottom surface is
shaped and sized to substantially cover the substrate receiving surface;
one or more gas conduits coupled to the expanding channel, wherein at least

one of the one or more gas conduits has an inner diameter which increases toward the expanding channel and wherein the one or more gas conduits are positioned at an angle from a center of the expanding channel and wherein the one or more gas conduits comprise[[s]] one or more valves and couple the one or more valves to the expanding channel; and

one or more gas sources coupled to each valve.

46. (Canceled)

47. (Currently amended) The chamber of claim 46 ~~45~~, wherein at least one of the one or more gas conduits have has a tapered inner diameter which increases toward the expanding channel.

48. (Currently amended) The chamber of claim 46 ~~45~~, wherein each ~~at least one of the one or more~~ gas conduits comprises a plurality of sections have having a progressively larger inner diameter toward the expanding channel.

49-62. (Canceled)

63. (Currently amended) A chamber, comprising:

a substrate support having a substrate receiving surface;

a chamber lid comprising:

an expanding channel ~~extending from~~ at a central portion of the chamber lid; and

~~comprising~~ a tapered bottom surface extending from the expanding channel to a peripheral portion of the chamber lid, wherein the tapered bottom surface is shaped and sized to substantially cover the substrate receiving surface;

one or more gas conduits ~~disposed around an upper portion of~~ coupled to the expanding channel, wherein a longitudinal axis of at least one of the one or more gas conduits are is not parallel to a longitudinal axis ~~disposed at an angle from a center of~~

the expanding channel, and wherein the one or more gas conduits comprise one or more valves; and

one or more gas sources coupled to each valve ~~a choke disposed on the chamber lid adjacent a perimeter of the tapered bottom surface.~~

64. (Currently amended) The chamber of claim 63, wherein the longitudinal axis of at least one of the one or more gas conduits are is disposed normal at a 90 degree angle to [[a]] the longitudinal axis of the expanding channel.

65. (Canceled)

66. (Currently amended) The chamber of claim ~~65~~ 63, wherein the longitudinal axis of at least one of the one or more gas conduits are is angled downwardly with respect to a plane which could be drawn perpendicular to the longitudinal axis of the expanding channel.

67. (Currently amended) The chamber of claim ~~65~~ 63, wherein the longitudinal axis of at least one of the one or more gas conduits are is angled upwardly with respect to a plane which could be drawn perpendicular to the longitudinal axis of the expanding channel.

68-129. (Canceled)

130. (New) The chamber of claim 45, wherein a longitudinal axis of at least one of the one or more gas conduits is not parallel to a longitudinal axis of the expanding channel.

131. (New) The chamber of claim 45, wherein a longitudinal axis of at least one of the one or more gas conduits is disposed at a 90 degree angle to the longitudinal axis of the expanding channel.

132. (New) The chamber of claim 45, wherein a longitudinal axis of at least one of the

one or more gas conduits is angled downwardly with respect to a plane which could be drawn perpendicular to the longitudinal axis of the expanding channel.

133. (New) The chamber of claim 45, wherein a longitudinal axis of at least one of the one or more gas conduits is angled upwardly with respect to a plane which could be drawn perpendicular to the longitudinal axis of the expanding channel.